Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Conclusions

Inflammatory-type optic neuritis caused by solvent is an entity rarely described in the literature. We present a clinical case with acute onset of symptoms after use of solvent with spontaneous resolution after eight days. Faced with optic neuritis, we must carry out a broad differential diagnosis, insisting on the anamnesis for the use of substances, even days before. The deficit of folic acid can guide us to toxicity as a cause.

doi:10.1016/j.jns.2021.118478

118479

Missing tissues in eye and heart with facial palsy – Case report of CHARGE syndrome with late presentation as heart failure

Alex Rebello[a], Ann Rodrigues[b], Anupriya Kaliyappan[c], *[a]Postgraduate Institute of Medical Education and Research (PGIMER), Neurology, Chandigarh, India, [b]Giridhar Eye Institute, Ophthalmology, Kochi, India, [c]Jawaharlal Institute of Postgraduate Medical Education and Research, General Medicine, Puducherry, India*

Background and aims

CHARGE syndrome is a rare multisystem genetic disorder. Mutation in CHD7 gene was seen in around 58–64% of cases. It is usually diagnosed in infancy or childhood owing to the characteristic clinical features. However, there are occasionally late presentations, especially in resource limited settings where the clinical features may be ignored by the patients and there is delay in seeking medical care. We report a case of CHARGE syndrome with late diagnosis presenting with heart failure.

Methods

CASE PRESENTATION: A 24-year-old male presented with exertional breathlessness, orthopnea and paroxysmal nocturnal dyspnea for 1-month duration. He was born out of non-consanguineous marriage and had normal antenatal and perinatal periods. He had mild developmental delay in motor milestones and difficulty in vision. However, he did not get evaluated earlier. There was no significant family history. On examination, he had short stature, microcornea, coloboma of iris and retina, external ear anomaly, prognathism, hockey-stick palmar crease and left facial palsy. Cardiac system examination suggested heart failure.

Results

Routine blood investigations were normal. Echocardiography showed ostium secundum atrial septal defect and features of pulmonary artery hypertension. He was diagnosed as having CHARGE syndrome based on the clinical findings. Genetic studies couldn't be done due to financial constraints. He was treated with diuretics for cardiac failure and planned for atrial septal defect closure.

Conclusions

It is a disease which needs early diagnosis as it involves multiple systems and requires early multi-modality intervention. The characteristic clinical features, which if recognized early will help in early diagnosis and management of this condition.

doi:10.1016/j.jns.2021.118479

118480

Visuocognitive impairment in multiple sclerosis: The relationship between neuropsychological and evoked potential measures

Christian Cordano[ab], Luca Mazzella[c], Carla Ogliastro[b], Maria Cellerino[b], Lucilla Vestito[b], Fabio Bandini[d], *[a]UCSF, Neurology, San Francisco, United States of America, [b]University of Genova, Department of Neurology, Genova, Italy, [c]P.A. Micone Hospital-ASL 3 Genovese, Cdcd/Parkinson Center, Genova, Italy, [d]ASL 3 Genovese, Neurology, Genova, Italy*

Background and aims

Visual evoked potentials (VEPs) and event-related potentials performed with visual stimulation (VERPs) can be recorded non-invasively from different regions of the scalp. To compare simultaneously recorded VEPs and VERPs in multiple sclerosis (MS) patients without visual impairment.

Methods

We performed a study of simultaneously recorded “primary” (VEPs) and “cognitive” (ERPs) visual evoked potentials in a group of MS patients who have no signs or symptoms of visual dysfunction. Two unidimensional Gabor patches of 1 cycle per degree of spatial frequency, differing in the orientation of the gratings, were presented in an “odd-ball” paradigm to 30 patients with MS and 30 age-matched control subjects. We measured latencies and amplitudes of N70, P100, and P300 components, deriving the “normalized” measures of P300-N70 latency difference (Central Processing Time - CPT70), the P300-P100 latency difference (CPT100), and the P300 amplitude responses normalized to either N70 and P100 amplitude.

Results

We evaluated the relationship between primary and cognitive processing abnormalities. Then we investigated whether or not patients with orientation-dependent VEP changes, which are thought to be due to cortical pathology, have VERPs abnormalities. Third, we investigated if individual orientation-specific VEPs and VERPs results correlate with selective neuropsychological test scores for visuoperceptual or visuospatial skills. A wide battery of neuropsychological tests was performed. We found a significant correlation ($r = 066$, $p < 0.01$) only between the Stroop test and the raw and normalized (CPT) P-300 results.

Conclusions

Simultaneously recorded VEPs and VERPs in MS patients are a promising tool for the study of cognitive function in MS.

doi:10.1016/j.jns.2021.118480

118481

Atypical visual impairment associated to cerebral sinus stenosis related to COVID-19 thrombosis

Mona Rekik[a], Omar Ayadi[a], Khadija Sonda Moalla[b], Imene Kaibi[a], Amira Ben Moula[a], Salma Gargouri[a], Amira Trigui[a], Chokri Mhiri[b], *[a]Habib Bourguiba Hospital, Ophtalmology Department, Sfax, Tunisia, [b]Habib Bourguiba Hospital, Neurology Department, Sfax, Tunisia*

Background and aims

Cerebralvenoussinus stenosis (CVSS) may further complicate cerebral venous thrombosis(CVT) which is a rare thromboembolic complications in COVID-19 patients. We report a case of post COVID 19 CVT-related CVSS associated to intracranial hypertension (ICH). We discuss the possible mechanisms of highly asymmetric visual repercussions of ICH.

Methods

A 45-year-old woman presented with complains of isolated visual loss in the right eye (RE). Her medical history included COVID-19 CVT for the past month. Visual acuity was 2/10 in the RE and 10/10 in the left eye. Fundus examination revealed bilateral papilledema, more important in the RE. The ultrasound examination showed right ON calcifications. Brain MRI showed features of raised intracranial pressure and revealed incidentally an extra axial meningioma surrounding the left ON in its retrobulbar portion. Brain MRA showed right lateral sinus stenosis. Lumbar puncture revealed significantly elevated intracranial pressure. Endovascular stenting was proposed.

Results

CVSS can cause chronically-ICH. Patients may have no neurological symptoms other than visual impairment, secondary to bilateral papilledema. In this case, the visual repercussions of ICH were highly asymmetric. Compartmentalized cerebrospinal fluid would be a possible mechanism for asymmertic papilledema. The meningioma of the left ON could protect optic fibers from increased intracranial pressure. The ON head drusens of the RE would be an aggravating factor.

Conclusions

Clinicians should consider the risk of CVT in the COVID-19 pandemic. Ocular symptoms could be the initial signs of CVSS. Correctly recognizing this condition is very important to avoid delayed treatment and complications.

doi:10.1016/j.jns.2021.118481

118482

Recurrent optic neuritis revealing mycoplasma pneumonia infection

Sonda Kammoun[a], Mona Rekik[a], Khadija Sonda Moalla[b], Saloua Ben Amor[a], Takwa Sammouda[a], Kmar Maaloul[a], Amira Trigui[a], Chokri Mhiri[b], *[a]Habib Bourguiba Hospital, Ophtalmology Department, Sfax, Tunisia, [b]Habib Bourguiba Hospital, Neurology Department, Sfax, Tunisia*

Background and aims

M. pneumoniae (MP) is an atypical bacterium that can cause a variety of respiratory infections as well as neurological and ocular involvement such as conjunctivitis, third or sixth nerve palsies, uveitis and rarely optic neuropathy (ON).

Methods

A 38-year-old woman had a typical retro bulbar ON of the right eye, treated with corticosteroid therapy at high doses. Visual acuity improved to 16/20 after 5 days. One week later, she consulted for visual loss of the same eye at 6/20 associated with conjunctivitis. Neurological examination and brain MRI showed no abnormalities. A history of neglected respiratory infection was found with no evidence of other infection or auto-immune disease. The diagnosis of MP infection was established due to the presence of MP specific IgM antibodies. The patient was treated with corticosteroids and fluoroquinolones. Outcome was favorable with complete regression of symptoms, and no recurrence after a follow-up of 4 years.

Results

The pathologic mechanism of extra-pulmonary involvement of MP remains unclear but is thought to be the result of direct invasion of the central nervous system, or a post infectious immune response. The coexistence of respiratory and visual symptoms with high levels of MP specific IgM antibodies underlines the possibility that the two infectious and auto-immune mechanisms are concomitant. This suggestion could justify antibiotic and steroid combination therapy and may explain initial improvement with corticosteroids in our case.

Conclusions

Atypical optic neuritis in a young adult should prompt consideration of a serologic testing for MP infection especially in endemic regions.

doi:10.1016/j.jns.2021.118482

118483

Tolosa-Hunt syndrome: A rare entity

Mona Rekik[a], Sonda Kammoun[a], Khadija Sonda Moalla[b], Mariem Mariem Abdelhedi[a], Takwa Sammouda[a], Sofien Affes[a], Salma Gargouri[a], Amira Trigui[a], Chokri Mhiri[b], *[a]Habib Bourguiba Hospital, Ophthalmology Department, Sfax, Tunisia, [b]Habib Bourguiba Hospital, Neurology Department, Sfax, Tunisia*

Background and aims

Tolosa Hunt syndrome(THS) is an inflammatory process adjacent to the cavernous sinus or within the superior orbital fissure and/or orbital apex. It is a rare entity well-defined clinically but of unknown etiopathogenesis.

Methods

A 26-year-old woman presented with painful eye movements and diplopia. Examination revealed left ophthalmoplegia, ptosis with exophthalmos. Visual acuity was 7/10 in the left eye, 10/10 in the right eye. Fundoscopic examination was normal in both eyes. The remainder of the neurologic examination was unremarkable. Brain MRI revealed left orbital apexitis with diffusely enhancing left orbital apex extending to the anterior cavernous sinus and oculomotor muscles. The immunological and infectious assessments were negative. The diagnosis of THS was made, and the patient received corticosteroids. Outcome was favorable with complete regression of oculomotor symptoms after few days of treatment.

Results

The clinical diagnostic criteria of THS include an episode or episodes of unilateral orbital pain; paralysis of one or more of the third, fourth, and sixth cranial nerves; and resolution of symptoms within 72 h after corticosteroid therapy, with exclusion of other causes. MRI findings show inflammatory changes within anterior cavernous sinus, with or without involvement of the internal carotid artery, superior orbital fissure, orbital apex and optic nerve.

Conclusions

Although THS is often a benign condition, it may lead to optic nerve involvement and blindness. Therefore, it is important to recognize the clinical features of this disease and provide immediate treatment to preserve visual function.

doi:10.1016/j.jns.2021.118483